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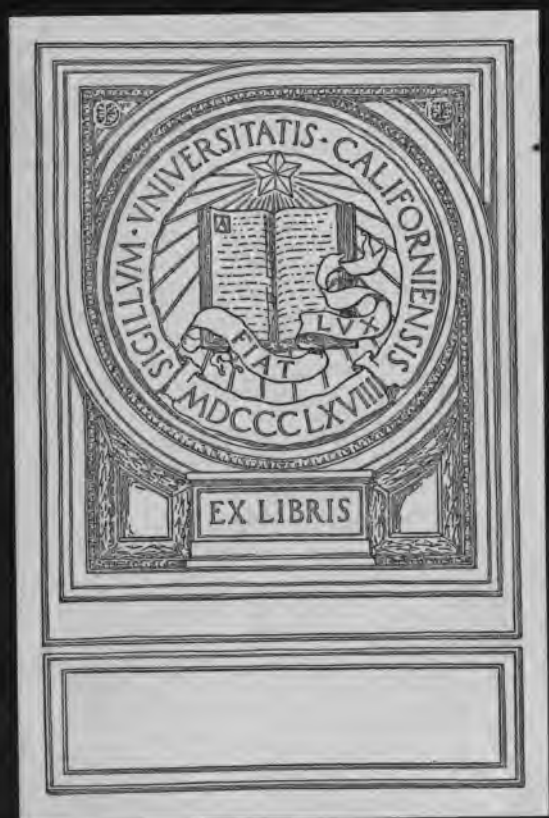
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HOW TO PAY

FOR THE

HOOSAC TUNNEL,

BY

FIXING THE TERMINUS OF THE TUNNEL LINE
ON THE SOUTH BOSTON FLATS BELONG-
ING TO THE COMMONWEALTH.

By EDWARD ATKINSON.

BOSTON :
A. WILLIAMS & COMPANY.

1873.

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THE TERMINUS

OF THE

HOOSAC TUNNEL LINE.

The discussion of the tunnel question last winter, before the railway committee and the Legislature, proceeded upon an implied admission that the only feasible terminus of the tunnel line upon deep water was upon the north side of Boston and as to merchandise on the Mystic river, — hence the complication in regard to the Fitchburg and Lowell Railroad corporations.

If western produce is brought to tide-water on the north side, it must be delivered on the wharves beyond Charles river, that can only be reached from the business centre of Boston through the narrow and crowded streets of the north end and by crossing bridges. It may also prove that the terminal grounds on the north side will be wanted, within a few years, for western traffic coming over the northern or Ogdensburg routes and for northern and eastern business.

Hence it follows, that if the ample grounds upon deep water at South Boston, about to be filled on behalf of the State and other owners, can be reached by the construction of a few miles of connecting railway, by which both the tunnel and the Boston and Albany traffic can be brought there, the preference should be given to South Boston as the best terminus of the tunnel line.

The object of this paper is to prove that the construction of a junction road is perfectly feasible at a very moderate cost; that by it the property of the Commonwealth in the Hoosac Tunnel, the Boston, Hartford & Erie R. R., and in about seven hundred acres of

flats at South Boston may be united, and through such union the Commonwealth may escape loss on its railroad and tunnel investments, at the same time realizing the public benefit expected from these enterprises.

The proposed junction line would lie within the fourth and eighth mile circles from Boston City Hall as to its termini, and will constitute a broad curve from Dorchester to Weston and Waltham. It may be traced on any map of Boston and vicinity, by the following description; (also on the accompanying map by the letters indicating the several points) : —

Beginning at a point (B) upon the Blackstone division of the Hartford & Erie R. R. in Dorchester, at or near the Mt. Bowdoin Station, thence in the direction of and north of Forest Hill Cemetery, crossing the Providence R. R. by a bridge above grade, a little to the north of Forest Hill station (C) ; thence through a deep gorge in the Bussey farm (or, if a hill on the north side of the Bussey farm shall prove to be gravel, then around and north of the Bussey farm) ; thence across the Weld farm on a meadow level, to Newton Highlands, on the Woonsocket division of the Hartford & Erie R. R. (E.)

The length of the section (B to E) would be about seven and a half miles, the up grade not exceeding fifty-three feet to the mile going west, and not over twenty-seven feet to the mile coming east. The construction will be free from difficulty, and free from any extra expense, except in crossing Jamaica Plain and bridging the Providence R. R.

A line may be found upon a cheaper route as to cost, between substantially the same points, passing to the south of Forest Hill Cemetery, across the Providence Railroad, between Spring street and Jamaica Plain and to the west of the Bussey farm, but it would be somewhat longer.

The construction of the section (B to E) would unite the two divisions of the Hartford and Erie R. R. at the point nearest Boston, at which such union can be made without an excessive cost, and it would open an area of very beautiful country, in which a large way business would be speedily developed.

The next section of the junction road would be a continuation of

the line from Newton Highlands (E), into Weston, making a connection with the Massachusetts Central R. R. a tunnel line (I). This section would be about seven miles in length, and would cross the Boston & Albany R. R. above grade, but a connection could easily be made with this road, by a short spur in (F to J) Newton and Needham of about two miles in length.

A reconnoissance of this section by an engineer, and an examination of previous surveys made for other purposes, indicate no difficulty in its construction.

Another spur from this section, not exceeding one and a half miles in length, would unite with the Fitchburg R. R. in Waltham, at a point (G to K) where that road makes almost a right angle from its previous course to come in on the north side of Boston. This connection would be with the road over which it has been assumed that the tunnel traffic must mainly come, and the line thus provided to deep water at South Boston would be very little longer than the distance from the connecting point (K) to the present terminus of the Fitchburg R. R.

A connection could also be made at little cost in Weston (H) with a new line from Hopkinton via Ashland and Cochituate, for which it is said the means of construction have been provided as far as Weston, and which it is intended to connect with one of the northern roads; but as the towns interested in the line are largely engaged in the boot and shoe manufacture, the opportunity to bring their traffic to Federal, Pearl and Summer streets could not be lost.

It thus appears, by the construction of about eighteen miles of new track, including the spurs to connect with the Albany & Fitchburg Railroads, nearly all western and northwestern traffic may be concentrated upon the seven hundred acres of land at South Boston, belonging to the State. If the connection with the Massachusetts Central R. R. be deferred, it will require only about thirteen miles of new track to make connections with the Fitchburg R. R., the principal tunnel line, and the Boston & Albany R. R.

One other connection may afterwards be made by which all the possible tunnel lines may be concentrated. A survey has been made

of a line of easy construction, from a point (L) on the Mansfield & Framingham R. R., through South Natick and Needham, about nine miles to Newton Highlands (E), whereby a connection would be established with the Boston, Clinton & Fitchburg R. R.

Another survey has been made from L to D, of a line which is a little longer, but which, if constructed, would furnish the most direct line from Framingham to South Boston.

The main feature of the plan advocated in this paper is the junction line connecting the Fitchburg, Massachusetts Central, Boston & Albany, and Woonsocket roads, with the terminus at South Boston. The connection with Framingham is not a necessary part of this plan.

The establishment of the proposed terminus at South Boston would serve the purpose of foreign traffic and of a large portion of the domestic business, and would at the same time reduce the cost of the distribution of the manufactures of South Boston. The two South Boston sugar refineries now pay over \$40,000 a year for the cartage of sugar from their premises, a very large portion of which might be saved, since the junction road would connect their works with all parts of the country. This saving alone would be nearly equal to the interest on a fair cost of construction of so much of the junction road as would connect the Fitchburg, Boston & Albany and Woonsocket roads with the Hartford & Erie main line.

But there is also a very large quantity of merchandise that must be sorted in and distributed from warehouses in Boston proper, or manufactured in the various works at the south end, such as lumber, leather, iron, cotton and wool. To meet this need, and to save the cost of truckage and the wear of streets, the following suggestion is made.

Swett street and East Chester Park must soon be extended across the marshes and flats at the head of South Bay to South Boston. If laid out upon the plan now contemplated, they will diverge at a somewhat acute angle from a point of junction (M) at or near the gasometer of the Roxbury Gas Works, east of Roxbury Creek. Swett street will trend easterly to Dorchester avenue, crossing the Hartford

& Erie Railroad in South Bay, and East Chester Park will trend northerly, crossing the Hartford & Erie Railroad on the marsh.

Upon these two streets provision may be made for laying railroad tracks as far as Washington street, crossing Albany street and Harrison avenue. If tracks are also laid upon these streets, an immense area may be made useful for warehouses for wool, cotton, leather, flour and the like, and the lumber of the West, with the iron of the interior, may be delivered from the cars to the shops wherein they are to be worked. A connection may also be feasible between these tracks and the present Marginal Railroad.

East Chester Park, if continued of its present width, would be ample, and Swett street should be laid out with a view to this possibility, in order that merchandise brought to the South Boston wharves by sea may be carried on cars to the heart of the city.

If all the possibilities of the plans now suggested are considered, it will be obvious that the area of business in Boston will steadily extend southward and eastward and pass out of the region of narrow streets to a more ample space. If the heavy traffic is brought to South Boston both by land and sea, Pearl, Congress and Federal streets will become the great thoroughfares from State street, connecting with the new-made land in South Boston across the narrow channel that may be left open.

If the storage of cotton, leather and other bulky articles shall be transferred to the area before indicated, then the jobbing trade of various sorts must extend over Harrison avenue and over the intervening space.

Next, the way from the dwelling-houses of the west end to the business places will be down Kneeland, Eliot, Pleasant and Beech streets, and the retail trade will extend southward to the wider portions of Washington street.

More easy access must then be given from Charles street to the Lowell, Eastern and Maine Railroads, and the line of transfer from the two sides of the city may be more and more through Charles street and around the west side rather than around the east side of Beacon hill.

Still further to the south, but within the city limits, another short

extension of the junction line from Mt. Bowdoin (B) easterly to the Old Colony R. R. at or near Savin Hill (A) would make a useful connection with that road, and would also reach the land of the Old Colony Wharf Company, and the land recently known as Calf Pasture, that is now being filled. At this point (P to N) is an area of several hundred acres fronting on deep water on the channel made by Neponset river, accessible for large steamers. The plans of improvement at this point contemplate several docks for the use of lumber and coal vessels; and as they can be entered without passing any bridges, and the wharves will be distant from other places of storage, they will serve a most useful purpose, because they will be free from the danger of fire from outside risks, and at the same time very easily protected at all points in case of fire upon the premises.

By such a connection as that proposed with the Junction Line, these wharves upon Dorchester Bay would soon become the place of distribution of coal and lumber intended for interior consumption.

The extension of East Chester Park in a direct line from its present terminus will strike the premises of the Old Colony Wharf Co. here referred to.

A track could also be continued across Dorchester Bay along the south-east side of South Boston point to Section III. (Q) of the Commonwealth flats, whenever it was required for use either in filling or for traffic.

The next question arises, how and by whom shall a road be built that is to serve the purposes of various corporations, and have no equipment of its own?

The persons most directly interested in the matter are the owners of the land on the line. Land within ten miles of Boston, upon the main lines of railroad now existing, is worth five to ten fold as much as the larger portion of that which will be opened by the junction line; it has been the main purpose of the surveys on which this plan is based to open land; not until some time after they had been entered upon did the connection with the great through lines suggest itself. The projectors pretend to no special public spirit in having worked up this plan, but it has happened in this case, as it

almost invariably does in like cases, that public and private interests are coincident.

The area of substantially unoccupied land that will be opened by the junction line is better suited for healthy dwelling-places than almost any other area within ten miles of Boston. The junction road will pass through a valley that traverses the western side of the hills constituting the easterly water-shed of the Charles river; the general slope of the county is to the south-west and west; the sub-soil is chiefly gravel; the arable land is of excellent quality, and the supply of pure water is abundant.

From the key point (E) at Newton Highlands the several spurs or branches will diverge on an average level above low-water mark of about one hundred and twenty-five feet.

But, although the land owners have the most direct interest in the construction of the road, they have not the means to construct it upon as ample and comprehensive a plan as the public interest requires, nor should such a road be controlled and operated by parties having only a special and local interest.

That the land owners will ere long take measure for the construction of the portion of this line lying between West Roxbury and Newton Highlands, and thence possibly through Needham and South Natick to South Framingham, can hardly be doubted; but this would serve no great public need.

The questions now at issue are the larger ones, to wit:—

1st. Is it for the interest of the State and of the mercantile community that the junction road should be built and the connection of the tunnel with South Boston flats perfected?

2d. In what manner and by whom can this be accomplished?

The first question must be decided upon the facts as herein stated, or as they may be found to be upon further investigation and upon a more complete survey.

The second question will be treated purely as a question of profit or loss to the State; not as a method of promoting commerce, regulating railroad charges, or of building up the business of Boston. The simple and possibly the only true method is to put the plain questions: How can the State render the tunnel useful or profitable?

How can the State save itself from loss on the bonds of the Hartford & Erie R. R. held by it? How can the State make useful and, therefore, marketable its lands and flats at South Boston, amounting, according to the estimates of the Harbor Commissioners, to about seven hundred acres, represented on the map as Sections I., II., III., and including no flats on the south-east side of South Boston?

It has been admitted that the land owners on the line of the proposed junction road have a great interest but the paramount interest is that of the Commonwealth of Massachusetts, because it is the owner of the tunnel, of \$3,600,000 of the so-called Berdell bonds of the Hartford & Erie R. R., and of the South Boston flats.

The tunnel when completed will have cost somewhere about \$12,000,000, including interest, according to the official estimates, all of which will have been paid in money, and for which the State is now indebted. If all contingent expenses should be charged, the tunnel will, doubtless, have cost more than this when completed, but the writer is informed that this is about the sum at which it will stand charged upon the books of the State.

The State has not yet paid any money for its interest in the Berdell bonds. It issued State bonds, and took the Berdell bonds as collateral for the payment of the State bonds by the R. R. corporation; but at the time of the transaction the State received \$600,000 in money from the R. R. as a sinking fund, and the payments of interest on its bonds have not yet exhausted that sum.

Now, the State, by virtue of the foreclosure under the Berdell bonds, has become a stockholder in the New York and New England R. R. corporation, and the stock in this corporation can only be made valuable by such development of traffic as shall enable it to pay the interest upon the mortgages. To this end the construction of the junction line would surely tend, provided it was built by, or as a part of the New York and New England R. R. from B to E, so as to connect the Woonsocket and Blackstone divisions now separated.

It may depend upon how the State shall treat the New York and New England R. R., whether the bonds issued to the Hartford & Erie R. R. in exchange for the Berdell bonds shall be paid by taxation, or from the receipts and value of the railroad itself.

The State may, without any immediate cost or ultimate risk, take measures to assist the New York and New England R. R. to build so much of the junction line as lies between Mt. Bowdoin on its main track, and Newton Highlands on its Woonsocket division. A sale to the Boston & Albany R. R. of so much of the Woonsocket division as lies between Brookline and Newton Highlands, about six miles, would furnish a large portion of the means required. The construction of this portion of the junction line as a part of the New York and New England R. R. will make that road a unit, and give it the control of all its business. (B to E.)

It would then be obviously for the interest of the Boston & Albany R. R. to build a section across from Newton Highlands to its main track at Riverside station, three miles, or to connect with its Newton branch.

It would then remain only for the Fitchburg and the Massachusetts Central to build very short connecting tracks and the main elements of the junction would be complete; leaving only the connection with the Boston, Clinton & Fitchburg road, which portion of the plan is of minor importance.

The pass to South Boston is now by way of the New York and New England, late Hartford & Erie track, and it would be no more than the exercise of fair business judgment and rightful control on the part of the State, as chief owner in that road, to cause the connecting lines to pay such tolls for traffic over the junction line and through that pass, as should add to the value of the franchise in which it has so large a stake, at the same time assuring payment of any sum advanced for its construction. Such a course could not fail to make it easier for the road to raise funds for its equipment.

Now, suppose the roadway at South Boston is widened so as to give ample access to the South Boston wharves, that the South Bay marshes on each side of the present track are filled and used for side tracks, shops and works, and that elevators, emigrant-stations and warehouses are erected, can it be doubted that the large area of land over and above such uses will be brought to the full value of choice city lands for sale?

Let it be admitted that the State has an investment of \$12,000,000,

in the tunnel, \$3,600,000, in the New York and New England R. R. (late Hartford & Erie R. R.), and that it may be called upon to guarantee bonds on the junction-road for \$1,400,000, — a sum assumed to be ample to cover the entire plan proposed in this paper, holding the junction track as special security therefor, — then its total investment will be \$17,000,000 in railroad property. If by the construction of the junction road, the whole traffic indicated shall be carried to South Boston, and the Commonwealth lands shall thereby be brought to an average value of 60 cents per foot above the cost of filling, the sum accruing therefrom will be more than \$17,000,000, and then the tunnel, Berdell bonds and junction road might all be charged to profit and loss, or dedicated to public use, free of charge, except for maintenance.

In any event the sum or credit required to be lent to the New York and New England R. R. for the construction of the junction track, from Mount Bowdoin to Newton Highlands, or to Waltham and Weston so as to complete a tunnel connection at once, could not fail to be recovered from immediate sales of land, and the prospect of recovering the cost of the tunnel in this way would surely be far better than it would be to attempt to make the traffic through the tunnel pay even small interest on its cost.

The question as to the tunnel is, how to get the most benefit with the least loss; and if any method is possible, other than the one now proposed, it has yet to be presented.

If objection is taken to any further guaranty or investment on the part of the State in railroads, may not the flats themselves be used as a bonus, to induce private capital to undertake the work?

If even one-half the land at South Boston, or say three hundred and fifty acres, were set aside for the use of the several connecting roads, without charge, provided they would cause them to be filled and occupied and build the junction line, it could not be doubted that the revenue of the New York and New England R. R., from its connecting traffic, would assure the payment of the State debt therefor, while the three hundred and fifty acres of land that would still be left would need only to rise to a value of eighty cents per foot, to reimburse the State for the cost of the tunnel, say \$12,000,000.

The surveys and levels, on which the main features of the plan presented in this paper are based, have been taken at various times and for different purposes ; they have been combined and the possible connections exhibited, by Mr. Herbert F. Keith, Civil Engineer, without whose hearty co-operation, rendered without charge so far as the public part of the work is concerned, the writer would have been unable to submit this plan and statement.

The writer has never before undertaken to suggest or propose any railroad enterprise, and would not have presented the present plan except after consultation with many gentlemen of great experience in such matters.

If the suggestion of further State aid shall be deemed inconsistent with his views of the unfitness of the State to own, equip, or operate railroads, he desires to call attention to the fact that it is only for the purpose of recovering what is for the moment a bad investment, and purely as a question of profit and loss, that he now presents the case, and he would be heartily glad if wiser heads shall suggest better methods for compassing the objects treated in this paper.

If the plan cannot be considered without including State operation of the tunnel line or any other line of railway, he would as earnestly oppose that plan as he now confidently proposes a method of recovering the State's investment in an enterprise as yet unprofitable.

At the risk of repetition let it be considered that it now needs only eighteen miles of junction railroad to concentrate western and northwestern traffic at the south side of Boston ;* that the northern and eastern traffic now reaches deep water on the north side ; that the two termini are or may be connected in the city by the Marginal Railway, and that the side tracks on Chester Park and Harrison Avenue will give direct railway communication from the very centre of trade with all parts of the country, — and it needs only to conceive of the resulting traffic to predict the future prosperity of the State and of its

* If the connection with the Massachusetts Central R. R. be deferred for the present, it will require but little more than thirteen miles to unite the Fitchburg, Boston & Albany and Woonsocket Railroads with the track of the Hartford & Erie R. R. at Mount Bowdoin.

capital city. It is surely probable, if not absolutely certain, that this may all be done with profit in actual money to the Commonwealth.

The writer has received so much aid and suggestion from many persons that it would be fruitless to name them. He has only combined the suggestions of his friends in what he hopes may be a tolerably clear and comprehensive description.

The proposal for State aid to the New York and New England R. R. is made without any previous knowledge of the writer's intention to make it on the part of the managers of that corporation.

The several parts of this plan have developed themselves from time to time during the past few months and as each new possibility presented itself, the writer has been obliged to consult with men of previous railway experience, lest he should find that he had been dazed by the greatness of the opportunity. He now asks that his suggestions shall be considered fully and fairly, without regard to, or prejudice on account of, the private interest of himself or any other land owner. The only fear is that, because of the vast scope of the improvements and changes that may now or never be adopted, the possibility of compassing the whole will be lost.

Therefore, let the main point, to wit, the junction line from Dorchester to Newton Highlands, be considered on its own merits, and the other suggestions, as possible addenda.

It may not be amiss, in this connection, to point out the fact that the Bussey farm in West Roxbury, through which it is proposed to carry the Junction Railroad, covers nearly four hundred acres, and that it lies but a very little west of the geographical centre of the area covered by Boston proper, Dorchester, West Roxbury, Brookline and Brighton. Within that area there is no other parcel of land so well fitted for a public park.

This farm is now owned by the corporation of Harvard College for the purposes of an agricultural school. It has not yet proved to be very useful, but it cannot be sold. It could, however, be condemned under an enabling act for public use, and it may be suggested that a very moderate award of money might furnish a better basis for instruction in the sciences that have relation to agriculture than the land can ever become.

If all these towns should be annexed to Boston, as a portion have been, the Junction Railroad might also become the means of access to the future Central Park, through which it would pass in a sunken way, where it would do no injury.

The gravest question, however, now at issue in Boston, next to water supply and sewerage, is this very one of railroad approaches and terminal facilities upon deep water. No one, except the few who have made a complete investigation of the case, can be aware of the urgent need of a comprehensive plan for the settlement of this question before it is too late.

Western cities are now moving to secure ample railway approaches, while New York is suffering because the need was not foreseen in season.

When the gauge of the Grand Trunk Railway is changed, and all the connections are made in the east and north that are now contemplated, it cannot be doubted that all the water front on the Mystic River, in East Boston and in Charlestown, including the Navy Yard, will be needed for the traffic of the east and north. And unless the plan advocated in this paper, or a better one, shall *now* be decided upon, it will soon be too late, except at an enormous cost, to provide suitably for the railway traffic on the south side of Boston. If nothing more is done than now to take the land and lay a single track, for the mere purpose of preventing the way, now substantially open, from becoming obstructed by a dense population, that much ought to be done. It must not be forgotten that the new traffic, soon to come, is to consist of the most bulky commodities, requiring great spaces for handling and storing. Nor should the great fact be lost sight of, that the area of Boston, West Roxbury, Brookline and Brighton, will, within a very few years, be the home of half a million people.

The suggestion for further State aid to any railroad is made with many misgivings in view of the history of the tunnel and the Hartford & Erie corporation. If any combination could possibly be made for its construction between the several corporations which would use this junction road, it might be far more expedient for the State to grant a large portion of the flats as an inducement for such combination; but it is evident that such a line must of necessity be under

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